



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,068	12/06/2001	Hwan Won Kye	0630-1379P	4856
2292	7590	06/21/2006		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CHO, HONG SOL	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,068

Applicant(s)

KYE, HWAN WON

Examiner

Hong Cho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 10 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The abstract of the disclosure is objected to because it exceeds the maximum number of allowable words. Appropriate correction is required. See MPEP § 608.01(b).
3. The specification on page 10, line 19 recites extended header types 7 through 9 are defined in the present invention, however, there is no further description on type 9 in the specification.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
5. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to data structures, which is non-statutory subject matter. Such claims data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(a) that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by admitted prior art, which is shown as conventional art in figure 1.

Re claim 1, admitted prior art discloses media access control (MAC) header and payload data unit (PDU) (figure 1).

Re claim 2, admitted prior art discloses MAC header comprising a frame controller (FC), a MAC_PARM part, a LEN part, an EHDR part and a header check sequence (HCS) (figure 1).

Re claim 3, admitted prior art discloses the header comprises an EHDR part for showing the type, the length, the value, and the payload header suppression index (PHSI) of the extended header and changing the payload header suppression rule using the 3 extended types (figure 1).

Re claim 4, admitted prior art discloses the PDU comprising a source address part, a destination address part, a type/length part, user data and a cycling redundancy checking unit (figure 1).

Re claim 5, admitted prior art discloses payload header suppression rule comprising a payload header suppression size, a payload header suppression field, a

payload header suppression mask, and a payload header suppression verification (specification, page 4, lines 1-5).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 6, 7, 9, 11, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bunn et al (US 2002/0073227), hereinafter referred to as Bunn.

Re claims 6 and 11, Bunn discloses sending a message (*a first EH_TYPE packet*) to a cable modem termination system (CMTS, *a receiver*) designating support for extended protocol (*a payload header suppression rule*) (*transmitting a first EH_TYPE packet according to change in a payload header suppression rule to a receiver when the payload header suppression rule changes, in the case where communication is performed between a sender and the receiver*, paragraph [0099], lines 1-5), checking whether there exists an error in the first EH_TYPE packet (error checking is inherently done in a frame at data link layer), responding whether an extended protocol is supported by sending a message (*a second EH_TYPE packet*) (*determining whether to apply a new payload header suppression rule on the basis of the first EH_TYPE, and transmitting a second*

EH_TYPE packet to the sender, paragraph [0100], lines 1-3) and formatting data packets (a third EH_TYPE) for transmission to a cable modem termination system (CMTS) in accordance with extended protocol if the CMTS supports the extended protocol (terminating transmission of a common payload header suppression packet, setting a packet type as a third EH_TYPE, suppressing a packet into a new channel, and transmitting the packet when the second EH_TYPE packet is a success message, figure 4, element 408, paragraph [0100], lines 4-8) and formatting data packets for transmission to the CMTS in accordance with the extended protocol if the CMTS does not support the extended protocol (setting the packet type as a common media access control packet and transmitting the packet without performing suppression when the second EH_TYPE packet is a failure message, figure 4, element 409, paragraph [0100], lines 9-13).

Re claim 7, Bunn discloses a message indicating whether or not the CMTS supports the extended protocol (*the second EH_TYPE packet comprises a success or failure message, paragraph [0100], lines 1-4).*

Re claim 9, Bunn discloses a step of the sender determining that the receiver cannot support an extended protocol (*a step of the sender determining that the receiver cannot support an extended protocol a new payload header suppression rule, figure 4, element 406).*

Re claims 15 and 16, Bunn discloses formatting data packets (*a third EH_TYPE*) for transmission to a cable modem termination system (CMTS) in accordance with extended protocol if the CMTS supports the extended protocol (*terminating transmission of a common payload header suppression packet, setting a packet type as a third*

EH_TYPE, suppressing a packet into a new channel, and transmitting the packet when the second *EH_TYPE* packet is a success message, figure 4, element 408, paragraph [0100], lines 4-8) and formatting data packets for transmission to the CMTS in accordance with the extended protocol if the CMTS does not support the extended protocol (setting the packet type as a common media access control packet and transmitting the packet without performing suppression when the second *EH_TYPE* packet is a failure message, figure 4, element 409, paragraph [0100], lines 9-13).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
11. Claims 8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunn in view of Platt et al (U.S), hereinafter referred to as Platt.

Re claims 8 and 12, Bunn discloses a CMTS transmitting a message a predetermined number of times if no response s received from a CM, but fails to teach a CM transmitting a message a predetermined number of times if no response s received from a CMTS (*the sender continuously transmits the first EH_TYPE to the receiver until the second EH_TYPE packet is received from the receiver*, paragraph [0103], lines 1-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bunn so that a CM would initiate and perform the process of checking the supportability of extended protocol at a CMTS to ensure interoperability between a cable modem and a CMTS system.

Re claim 13, Bunn discloses a step of the sender determining that the receiver cannot support an extended protocol (*a step of the sender determining that the receiver cannot support an extended protocol a new payload header suppression rule*, figure 4, element 406), but fails to disclose performing an above step when the second EH_TYPE packet is not received from the receiver for a predetermined time. Bunn discloses a CM not responding if it does not support an extended protocol (paragraph [0103], lines 1-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bunn so that a CM would determine whether a CMTS supports the extended protocol or not to ensure interoperability between a cable modem and a CMTS system.

Allowable Subject Matter

12. Claims 10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
6/15/06



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600